

What is claimed is:

1. An isolated single or double-stranded DNA molecule which encodes a bovine adipocyte polypeptide leptin, the molecule consisting of the nucleotide sequence SEQ ID NO:3 or an allelic variant thereof.
2. An expression vector comprising the DNA molecule of Claim 1.
3. The vector according to Claim 2 in which the vector is a plasmid.
4. A host cell transformed or transfected with the plasmid of Claim 3.
5. An isolated mRNA molecule for encoding a bovine adipocyte polypeptide leptin, the mRNA molecule encoded by the nucleotide sequence of SEQ ID NO:3 or an allelic variant thereof.
6. An antisense RNA molecule which is complementary to a gene for encoding a bovine adipocyte polypeptide, the antisense RNA molecule capable of binding with an mRNA molecule sufficient to inhibit biosynthesis of the bovine adipocyte polypeptide.
7. The antisense RNA molecule of Claim 6 which is complementary to the nucleotide sequence SEQ ID NO:3 or an allelic variant thereof.
8. The antisense RNA molecule of Claim 7 comprising at least about 20 nucleotides.
9. The antisense RNA molecule of Claim 7 comprising at least about 50 nucleotides.
10. A bovine adipocyte polypeptide leptin encoded by a nucleic acid molecule consisting essentially of the nucleotide sequence SEQ ID NO:3, a sequence complementary to sequence SEQ ID NO:3, or an allelic variant of either sequence.

11. The bovine adipocyte polypeptide leptin of Claim 10 in which the polypeptide has the amino acid sequence of SEQ ID NO:4 or a functional derivative thereof.

12. An antibody directed against the bovine adipocyte polypeptide leptin of Claim 10.

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